The Locus of Cell Mechanisms



Figure 3.5. Golgi's drawing of what he identified as an internal reticular apparatus in a Purkinje cell of a barn owl. Reproduced from C. Golgi (1898), Sur la structure des cellules nerveuses, *Archives italiennes de Biologie*, 30, 60–71, Figure 2.

organelle before Golgi. It was Golgi, however, who devised a method that put the organelle in sharp contrast with other cellular components and permitted him and his students to demonstrate it as a consistent structural component in a wide variety of tissue cell types. It was also Golgi who recognized not only some of the details of its structure but also that it is variable in character and position. (1975, p. 3)

Shortly after Golgi's first publication, Emil Holmgren (1902) identified a set of clear canals within the cytoplasm that remained uncolored when the rest of the cytoplasm was stained. Holmgren construed these canals as formed by cytoplasmic processes penetrating into a cell from its neighbors and suggested that they might serve a nutritive function. He called them *trophospongium* and claimed they were the same as Golgi's reticular nets although they were located near the external membrane of the cell.

Initially Santiago Ramón y Cajal (1907; 1908) accepted the link between Golgi's reticular structure and Holmgren's canals and referred to them as the Golgi-Holmgren canals. Later he revised this assessment (Cajal, 1914)